

TST03: TSDIS/TSS INTERFACE, INGEST AND ARCHIVE TEST

Background:

The TRMM Support System, contained within the GSFC DAAC, has the responsibility for interfacing with the TSDIS Ground System for distributing TRMM science data products for reprocessing and to distribute ancillary data to TSDIS for processing and reprocessing. The TSS also distributes TRMM products to TSDIS Science Users (TSUs) for data trending and analysis. The TSS provides a user interface and information about TRMM data holdings to the TSUs. The purpose of the TSS is to archive TRMM science data products, distribute TRMM products to TSDIS for reprocessing, distribute ancillary data to TSDIS for processing and reprocessing, and distribute TRMM products to TSDIS users. The TSS will interface with NOAA and TOMS data archives for the purpose of obtaining data products for distribution to LaRC DAAC, TSDIS, and for archiving.

Test Objectives:

- To verify that the required messages can be transmitted between the GSFC DAAC TSS and TSDIS GSFC DAAC TSS -TSDIS ICD can be validated. The messages and data files are described in the GSFC DAAC TSS - TSDIS ICD.
- To verify that Level 1A - 3B VIRS, PR, TMI, GV and combined products, L-0 Housekeeping, Orbit, Browse, Metadata, Algorithms and other data can be ingested from TSDIS.
- To verify proper implementation of interface error handling and exception processing.
- To verify proper transfer of data files to TSUs via the ftp interface.
- To verify proper transfer of data files to TSDIS via the ftp interface.
- To verify file header and data structure of the files sent between TSDIS and GSFC DAAC TSS.
- To verify request of ancillary data files and the receipt and distribution of the files by the GSFC DAAC TSS.
- To verify the distribution of VIRS 1B data to LaTIS.
- To verify fault detection, as it relates to data ingest and archive.
- To test the throughput of the ingest and archive processes.

From	To	Message	Communications Link
TSS	TSDIS	Data Request/Retrieve	TSS/TSDIS Gateway
TSDIS	TSS	Data Request/Retrieve	TSS/TSDIS Gateway
TSDIS	TSS	Data Request	TSS/TSDIS Gateway
TSS	TSU	Data Availability & Retrieve	e-mail ftp
TSDIS	TSS	Status Request of Product Orders	e-mail or voice
TSDIS	TSS	Product Order Cancellation	e-mail or voice
TSDIS	TSS	Metadata Update	TSS/TSDIS Gateway
TSS	LaTIS	VIRS 1B	ftp

Table TST03-1 Message Flows

Test Configuration:

Exhibit TST03-01 is an overall TSDIS to GSFC DAAC TSS interface diagram. This test is designed to check all interfaces shown in this exhibit.

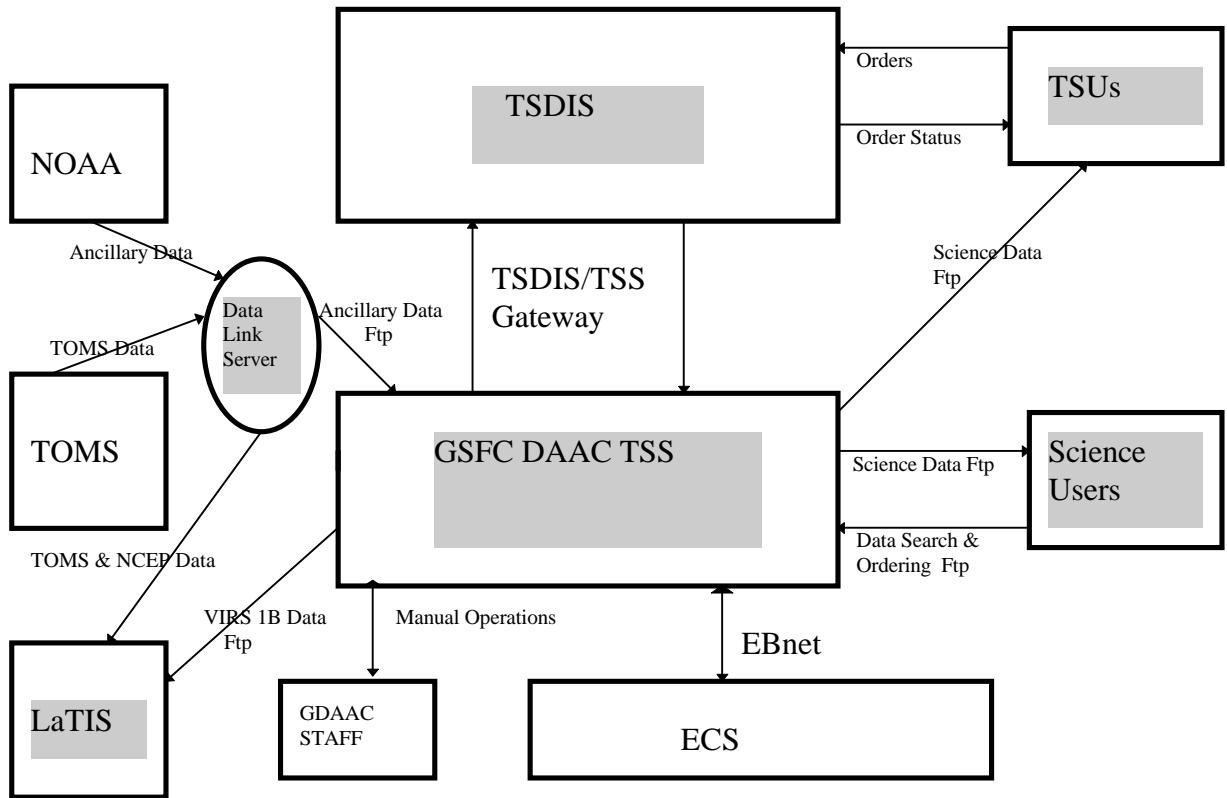


EXHIBIT TST03-01 TSDIS/TSS INTERFACES

(Shaded areas represent interfaces to be verified)

Participants and Support Requirements:

Participants:

M&O Support at the TSS.

TSDIS I&T Test Conductor.

I&T Test Conductor.

Participating TSU Site.

Communications:

Data and Messages -- GSFC DAAC TSS and TSDIS are connected via a common gateway.

Ftp Link(s) – Link between TSS and TSDIS, TSS to TSUs, TSS to NOAA, TOMS, and to LaTIS.

Voice -- TSDIS - TSS (Circuit TBD)

E-mail Availability

Equipment and Software:

Hardware: SUN Workstation, Gateway server, Ingest server, Data server.

Software: TBD

Data: configuration file, data files via ftp.

Tools: TBD

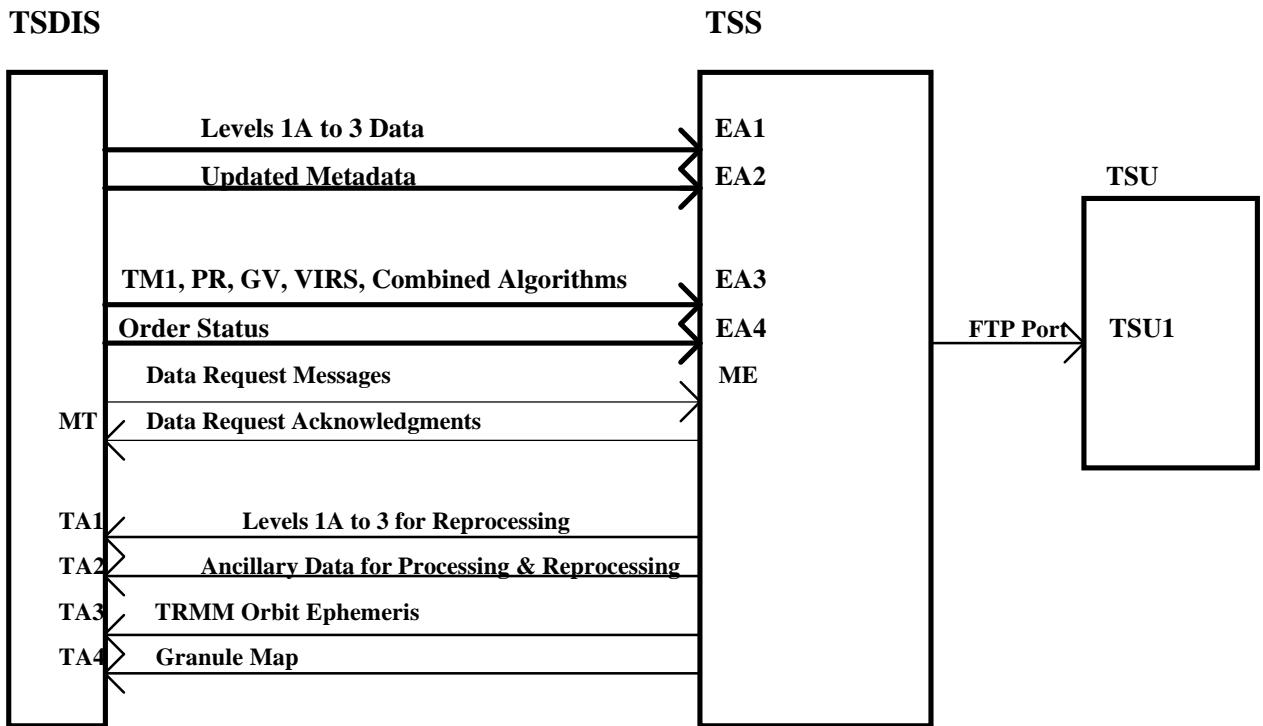


Exhibit TST03-02 Data and Message Flow Diagram

Test Data:

This test will utilize whatever data sets are made available from the parallel test that is being processed at the same time that this test is being conducted.

Test Procedures

Thread Id: V1-TST-03

Modified: 3/20/97

Description: TSDIS/TSS Interface, Ingest and Archive Test

The TRMM Support System, contained within the GSFC DAAC, has the responsibility for interfacing with the TSDIS Ground System for distributing TRMM science data products for reprocessing and to distribute ancillary data to TSDIS for processing and reprocessing. The TSS also distributes TRMM products to TSDIS Science Users (TSUs) for data trending and analysis. The TSS provides a user interface and information about TRMM data holdings to the TSUs. The purpose of the TSS is to archive TRMM science data products, distribute TRMM products to TSDIS for reprocessing, distribute ancillary data to TSDIS for processing and reprocessing, and distribute TRMM products to TSDIS users. The TSS will interface with NOAA and TOMS data archives for the purpose of obtaining data products for distribution to LaRc DAAC, TSDIS, and for archiving.

Test Case Id: V1-TST-03.001

Modified: 5/21/97

Description: TSS/TSDIS Gateway and Message flow Test, TSS initiates the messages.

The TSDIS will transmit a Start Session message to GSFC DAAC TSS and TSS will respond with a Start Session Acknowledgment. TSDIS will send a DAN to the TSS which will respond with a DAA and TSDIS will transmit a Close Session message. Data will be transferred, with GSFC DAAC responding at the end of the transfer with a DDN and TSDIS responding with a DDA message.

Objectives: Data files are transferred to TSS via ftp. The data server places the data files in specified locations. The incoming gateway validates with a DAA if no errors are found, and the delivery gateway sends a DDA for successfully completed data transfers files. Messages and files are transmitted between the TSS and TSDIS and the messages and file formats are verified as correct and agree with the ICD.

Configuration: Users are able to change configuration files. Software and hardware as detailed in the forward section of this plan is available and operational.

Data Inputs: Users must change the configuration file to reflect the incoming and delivery gateway executables. A configurable port is set for TSDIS/TSS gateway. DAN, DAA, DDA, and DDN message formats.

Methods for Results Analysis: This test will be successful if the external client can connect to a configurable port and verify DAN ->DAA incoming and DDN ->DDA delivery gateways.

Assumptions/Constraints: TBD

Verified Requirements:

DADS0145	DADS0170	DADS0405	DADS0410	DADS0440	DADS0475
DADS0490	DADS1070	DADS1080	DADS1330	DADS1300	DADS1791
DADS1795	DADS1800	TRMM3050	TRMM4010	TRMM4030	TRMM4040
TRMM4050	TRMM4060	TRMM4103	TRMM4104	TRMM5010	TRMM5040
DADS0220	DADS0760	DADS0660	DADS1380	DADS1390	DADS1400
DADS1472	DADS1510	DADS1530	DADS1540	DADS1630	DADS1780
DADS1805	DADS2320	DERIVE0001	EOSD0020	EOSD0030	EOSD0750
EOSD1502	EOSD1607	EOSD1608	EOSD1703	EOSD2440	ICD-0010
ICD-0020	ICD-0080	ICD-0090	ICD-0180	ICD-0210	ICD-0220
ICD-0260	ICD-0270	ICD-0290	ICD-0320	IMS-0240	IMS-0260
SDPS0080	SDPS0120				

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC TSS operator and open a UNIX-script file to maintain a test history.	Log-in Allowed, script file initiated.			3/5/97
1.002	TSS and TSDIS	Validate IP address and password information.	Both systems ascertain valid information.			3/5/97
1.003	TSS and TSDIS	Verify connection between the two systems.	Each system is configured to receive data from each other.			3/5/97
1.004	TSS	Log onto the resource planner and verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			3/5/97
2.001	TSDIS	Send a "Start Session" message				3/5/97
2.002	TSS	Receive a "Start Session" message and respond with a "Start Session Acknowledgment" message				3/20/97
2.003	TSDIS	Receive the "Start Session Acknowledgment" message and respond by sending a DAN				3/5/97
2.004	TSS	Receive the DAN and respond with by sending a DAA				3/20/97
2.005	TSDIS	Receive DAA message.				3/5/97
2.006	TSDIS	Send "Close Session" message.				3/5/97
2.007	TSDIS	Send a "Start Session" message				3/5/97
2.008	GSFC DAAC	Receive a "Start Session" message and respond with a "Start Session Acknowledgment" message		,		3/20/97
2.009	TSDIS	Receive the "Start Session Acknowledgment" message and respond by sending a DAN with a "Invalid DAN Sequence #"		Error Checking		3/5/97
2.010	TSS	Receive the DAN and respond with by sending a DAA indicating an error. The error indicated should be "Invalid DAN Sequence #"	View monitoring tool to observe receipt of the DAN and the sending of the DAA with the appropriate error indicated. Error is a invalid sequence number.	Error Checking		3/20/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.011	TSDIS	Receive DAA message. Correct DAN Sequence # and resend.	DAA received by TSDIS should indicate "Invalid DAN Sequence #". Short DAA.	Error Checking		3/5/97
2.012	TSS	Receive the corrected DAN and Responds with sending a DAA if DAN is now correct.		Error Checking		3/5/97
2.0121	TSDIS	Verifies that a DAN does not exceed a maximum message length of 1,048,576 B.	TSS verifies the length of the DAN.		ICD-0080,	5/21/97
2.013	TSDIS	Send "Close Session" message.				3/5/97
2.014	TSS	Sends "Start Session" message.				3/5/97
2.015	TSS	Sends a DDN				3/5/97
2.016	TSDIS	Receives the DDN and responds with a DDA message.				3/5/97
2.017	TSS	Receives DDA message.				3/5/97
2.018	TSS, TSDIS	Repeat steps 2.015 through step 2.016 except send a DDN having a error bit set for Network Failure.	Bit 1 in the disposition field should indicate a value of 1. Short and Long DDN.	Error Checking		3/5/97
2.019	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for unable to establish ftp connection.	Bit 2 in the disposition field should indicate a value of 2. Short Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for DDN.	Error Checking		3/5/97
2.020	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for host denied access.	Bit 3 in the disposition field should indicate a value of 3. Short and Long DDN.	Error Checking		3/5/97
2.021	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for all file groups not found.	Bit 4 in the disposition field should indicate a value of 4. Short and Long DDN.	Error Checking		3/5/97
2.022	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for Ftp failure.	Bit 5 in the disposition field should indicate a value of 5. Short and Long DDN.	Error Checking		3/5/97
2.023	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for post transfer file size check failure.	Bit 6 in the disposition field should indicate a value of 6. Short and Long DDN.	Error Checking		3/5/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.024	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for Ftp command failure.	Bit 7 in the disposition field should indicate a value of 7. Short and			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.034	TSS, TSDIS	error bit set for Data conversion failure. Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for request canceled.	Short and Long DDN. Bit 251 in the disposition field should indicate a value of 251. Short and Long DDN.	Error Checking		3/5/97
2.035	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for unknown data type.	Bit 252 in the disposition field should indicate a value of 252. Short and Long DDN.	Error Checking		3/5/97
2.036	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for invalid or missing file type.	Bit 253 in the disposition field should indicate a value of 253. Short and Long DDN.	Error Checking		3/5/97
2.037	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for file I/O error.	Bit 254 in the disposition field should indicate a value of 254. Short and Long DDN.	Error Checking		3/5/97
2.038	TSS, TSDIS	Repeat steps 2.015 through step 2.017 except send a DDN having a error bit set for data archive error.	Bit 255 in the disposition field should indicate a value of 255. Short and Long DDN.	Error Checking		3/5/97
3.001	TSS	Receives "Close Session" message.				3/5/97

Test Case Id: V1-TST-03.002

Modified: 5/22/97

Description: TSDIS/TSS Gateway and Message Flow test., TSDIS initiates the messages..

TSDIS opens the TCP/IP connection to the Gateway, and sends the Start Session message. GSFC DAAC TSS returns the Start Session Acknowledgment message. TSDIS sends a DR with GSFC DAAC responding with a DRA. GSFC DAAC sends a DAN with TSDIS responding with a DAA. Data is transferred. The session ends with TSDIS sending a End Session message and GSFC DAAC responding with a End Session acknowledgment. TSDIS sends a DDN and GSFC DAAC responds with a DDA and the session is closed.

Objectives: Data files are transferred to TSS via ftp. The data server places the data files in specified locations. The incoming gateway validates with a DR, DDN if no errors found, and the delivery gateway sends a DRA, DDA for successfully completed data transfers files. Messages and files are transmitted between the GSFC DAAC and TSDIS and that the messages and file formats agree with the ICD.

Configuration: Users are able to change the configuration files. Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: Users must change the configuration file to reflect the incoming and delivery gateway executables. A configurable port is set for TSDIS gateway. DR, DRA, DAN, DAA, DDN, and DDA message formats.

Methods for Results Analysis: This test will be successful if the external client can connect to a configurable port and verify DR ->DRA, DAN ->DAA, DDN ->DDA incoming and delivery gateways. Messages and files are transmitted between the GSFC DAAC and TSDIS and that the messages and file formats agree with the ICD. Verify at the work stations that the messages are received and that acknowledgments are sent and received correctly.

Assumptions/Constraints: TBD

Verified Requirements:

DADS0610	DADS0660	DADS1330	DADS1380	DADS1806	DADS2160
DADS2340	DADS2410	DADS2430	EOSD0020	EOSD0030	EOSD0750
ICD-0030	ICD-0040	ICD-0090	ICD-0100	ICD-0320	TRMM4090
TRMM4100	TRMM4103	TRMM5040			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC TSS operator and open a UNIX-script file to maintain a test history.	Log-in Allowed, script file initiated.			5/21/97
1.002	TSS and TSDIS	Validate IP address and password information.	Both systems ascertain valid information.			3/5/97
1.003	TSS and TSDIS	Verify connection between the two systems.	Each system is configured to receive data from each other.			3/5/97
1.004	TSS	Log onto the resource planner and verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			3/5/97
2.001	TSS and TSDIS	TSS sends a "Start Session" message and TSDIS receive a "Start Session" message and responds with a "Start Session Acknowledgment" message.				3/5/97
2.002	TSDIS	Issues a Data Request (DR) message.				3/5/97
2.003	TSS	Receives the DR, authenticates the message, and sends a DRA to TSDIS.	Verify that the DR message format meets the requirements of Table 4-14 and 4-15 of			3/5/97
2.004	TSDIS	Sends a "Close Session" message.				3/5/97
2.005	TSS	Receives the "Close Session" message.				3/5/97
2.006	TSS	Sends a DAN message.				3/5/97
2.007	TSDIS	Receives DAN message and responds by sending DAA.				3/5/97
2.008	TSS	Receives DAA message.				3/5/97
2.009	TSDIS	Opens a ftp circuit with the GSFC DAAC Host. Issues a "get" message and receives the data file.				3/5/97
2.010	TSS	TSS places the file on a ftp port and notifies TSDIS of the placement.				5/21/97
2.0101	TSS	TSS checks the file 47 hours after	File must remain available to TSDIS		ICD-0100,	5/21/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
		placing the file for transfer, to assure that the file is still available.	for at least 48 hours.			
2.011	TSDIS	Issues a Start Session message.				3/5/97
2.012	TSS	Receives the Start Session message and responds with a Start Session Acknowledgment.				3/5/97
2.013	TSDIS	Sends a DDN to GSFC DAAC.				3/5/97
2.014	TSS	Receives the DDN and responds with a DDA.				3/5/97
2.015	TSS	Sends a DAN message.				3/5/97
2.016	TSDIS	Receives DAN message and responds by sending DAA.				3/5/97
2.017	TSS	Receives DAA message.				3/5/97
2.018	TSDIS	Opens a ftp circuit with the GSFC DAAC Host. Issues a "get" message and receives the data file.				3/5/97
2.019	TSS	Transfers the data file to TSDIS.				3/5/97
2.020	TSDIS	Issues a Start Session message.				3/5/97
2.021	TSS	Receives the Start Session message and responds with a Start Session Acknowledgment.				3/5/97
2.022	TSDIS	Sends a DDN to GSFC DAAC.				3/5/97
2.023	TSS	Receives the DDN and responds with a DDA.				3/5/97
3.001	TSDIS	Issues a "Close Session" message.				3/5/97
3.002	TSS	Receives "Close Session" message.				3/5/97

Test Case Id: V1-TST-03.003

Modified: 5/22/97

Description: TSDIS Requests Data for TSUs from TSS.

The sequence of Gateway and handshake control messages and file transfers needed for TSUs to obtain data from GSFC DAAC via TSDIS. TSDIS establishes a TCP/IP connections and sends the Start Session message. GSFC DAAC returns the Start Session Acknowledgment message. TSDIS sends a DR with GSFC DAAC responding with a DRA. GSFC DAAC sends a DAN with TSDIS responding with a DAA. Data is transferred. The session ends with TSDIS sending a End Session message and GSFC DAAC responding with a End Session acknowledgment. TSDIS sends a DDN and GSFC DAAC responds with a DDA and the session is closed.

Objectives: The incoming gateway validates with a DR , if no errors found, and the delivery gateway sends a DRA, for successfully completed data transfers files. Messages and files are transmitted between the GSFC DAAC and TSDIS and that the messages and file formats agree with the ICD. Messages and files are transmitted between the GSFC DAAC and TSDIS and that the messages and file formats agree with the ICD. Also a connection is established with a TSU and a file is transferred to the TSU.

Configuration: Users are able to change the configuration files. Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: Users must change the configuration file to reflect the incoming and delivery gateway executables. A configurable port is set for TSDIS gateway. DR DRA, message formats. Also establish a ftp link to TSU.

Methods for Results Analysis: This test will be successful if the external client can connect to a configurable port and verify DR ->DRA, incoming and delivery gateways. Messages and files are transmitted between the GSFC DAAC and TSDIS and that the messages and file formats agree with the ICD. Verify at the work stations that the messages are received and that acknowledgments are sent and received correctly.

Assumptions/Constraints: TBD

Verified Requirements:

DADS0760	DADS1030	DADS1806	DADS2315	DADS2450	DADS2490	DADS2510
EOSD0750	EOSD2440	ICD-0090	ICD-0150	ICD-0170	ICD-0200	ICD-0230
ICD-0250	ICD-0320	TRMM4101	TRMM4104	TRMMPRO0010		

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC TSS operator and open a UNIX-script file to maintain a test history..	Log-in Allowed,, script file initiated.			3/5/97
1.002	TSS and TSDIS	Validate IP address and password information.	Both systems ascertain valid information.			3/5/97
1.003	TSS and TSDIS	Verify connection between the two systems.	Each system is configured to receive data from each other.			3/5/97
1.004	TSS	Log onto the resource planner and verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			3/5/97
2.001	TSDIS	Send "Start Session" message.				
2.002	TSS	Receive "Start Session" message and respond with "Start Session Acknowledgment"			ICD-0090,	5/21/97
2.003	TSDIS	Send DR message.				3/5/97
2.004	TSS	Receive DR and respond with DRA.				3/5/97
2.005	TSDIS	Receive DRA.				3/5/97
2.006	TSS	Send E-mail to user (TSU) notifying of Data Availability via the fip port.	Send E-mail with return receipt so that test conductor is aware of when the TSU receives and reads the E-mail.		DADS2450, TRMMPRO00 10,	5/22/97
2.007	TSU	Opens a fip port and issues a "get" request for the data file.				3/5/97
2.008	TSS	Data host fip's the data file to the TSU.				3/5/97
2.009	TSS	Check DR for type of data distribution and verify that TSS can generate the following media types: 8 mm tape, 4 mm DAT, 3480/3490 tape, CD ROM, and 6250 tape.	Verify that each media type can be generated.		DADS2490, DADS2510, DADS2450,	5/21/97

Test Case Id: V1-TST-03.004

Modified: 5/20/97

Description: TSS Ingests Data from TSDIS and stages it for archiving.

This test verifies that the TRMM Level 1A-3B VIRS, PR, TMI, GV and combined products, L-0 housekeeping, Orbit, Browse, Metadata, Orders, Schedule and status, Algorithms and documentation can be ingested to TSS from TSDIS and staged for archiving. The method for ingesting the data from TSDIS is via the TSDIS/TSS Gateway. The data is transferred and stored on the TSS archive media.

Objectives: The ability to ingest the TRMM data and successfully place that data in the archive.

Configuration: TBD

Data Inputs: Level 1A-3B TRMM data being made available from TSDIS.

Methods for Results Analysis: Verify that the data has been ingested and check the archive for location of the data and verify data in the archive.

Assumptions/Constraints: TBD

Verified Requirements:

DADS0010	DADS0020	DADS0281	DADS0290	DADS0300	DADS0310
DADS0370	DADS1070	DADS1080	DADS1300	DADS1380	DADS1390
DADS1400	DADS2320	EOSD0750	EOSD2440	ICD-0320	TRMM5010
ICD-0090					

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC operator and open a UNIX-script file to maintain test history.	Log-in allowed, script file initiated.			3/7/97
1.002	TSS, TSDIS	Validate IP address and password information.	Both systems ascertain valid information.			3/7/97
1.003	TSS, TSDIS	Verify connection between the two systems.	Each system is able to "ping" the other system.			3/7/97
1.004	TSS	Log onto the resource planner and verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			3/7/97
2.001	TSDIS	Send a DAN to TSS indicating that Level 1A-3B VIRS and etc. data is available for ingest .	TSS receives the message and ensures that adequate resources are available to ingest the data. If a problem exists, then notify TSDIS of the problem and wait to transfer the data until further notice.			3/11/97
2.002	TSS	Monitor the data transfer.	At the Ingest/Distribution technician's terminal observe the file being transferred.			3/11/97
2.003	TSDIS	Start the data transfer.	The TSS should observe that the transfer has started and also when the transfer has completed.			3/11/97
2.004	TSS	Determine that the file has been successfully transferred, that TSS has opened an archive file and that the file has been successfully archived.	With the successful file transfer and archive the TSS system will generate a DDN and send this to TSDIS. Operator should verify that the DDN has been sent and note the location of the archived file.			3/11/97
2.005	TSDIS	Receives the DDN and responds by sending a DDA.	TSS receives the DDA indicating that the file has been transferred and archived.			3/11/97

Test Case Id: V1-TST-03.005

Modified: 5/20/97

Description: TSS Archives the Data Received from TSDIS and recalls data for verification.

This test verifies that the TRMM Level 1A-3B VIRS, PR, TMI, GV and combined products, L-O housekeeping, Orbit, Browse, Metadata, and Algorithms can be archived and recalled from archived for reprocessing.

Objectives: The ability to archive the TRMM data and recall archived data when requested for reprocessing.

Configuration: TBD

Data Inputs: Level 1A-3B TRMM data being made available from TSDIS.

Methods for Results Analysis: Verify the file location of the archived data and verify that the correct data is retrieved for reprocessing.

Assumptions/Constraints: TBD

Verified Requirements:

DADS1080	DADS1300	DADS1380	DADS1390	DADS1400	DADS1472
DADS1510	DADS1795	DADS1800	DADS1805	DADS2320	DERIVE0001
EOSD0750	ICD-0090	ICD-0230	ICD-0320	IMS-0350	IMS-0450
TRMM4010	TRMM4030	TRMM4040	TRMM5010		

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC operator and open a UNIX-script file to maintain test history.	Log-in allowed, script file initiated.			3/17/97
1.002	TSS, TSDIS	Validate IP address and password information.	Both systems ascertain valid information.			3/12/97
1.003	TSS, TSDIS	Verify connection between the two systems.	Each system is able to "ping" the other system.			3/12/97
1.004	TSS	Log onto the resource planner and verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			3/12/97
2.001	TSDIS	Send a DAN to TSS indicating that Level 1A-3B VIRS and etc. data is available for ingest .	TSS receives the message and ensures that adequate resources are available to ingest the data. If a problem exists, then notify TSDIS of the problem and wait to transfer the data until further notice.			3/12/97
2.002	TSS	Responds with a DAA. The ingest/Distribution technician initiates the ingest sequence.	The system writes the data and the delivery record to the specified location within the TSS.			3/17/97
2.003	TSS	The Ingest/Distribution technician monitors the transfer.	The monitor shows data being transferred and detects the data delivery record.			3/17/97
2.004	TSS	The system now verifies the data with the delivery record.	The information is verified.			3/17/97
2.005	TSS	Metadata is verified and data is reformatted into HDF-EOS format.	The data and Metadata are archived into the appropriate data server.			3/17/97
2.006	TSS	System responds to TSDIS by sending a DDN.	Message received by data TSDIS and is responded to be the issuing of a DDA.			3/17/97
2.007	TSS	Record that a files names of the data ingested in this test. The data may be used in other tests.	Data file names are recorded.			3/17/97
2.008	TSS	Print out the history log to verify test activities.	All activities recorded in the history.			3/17/97

Test Case Id: V1-TST-03.006

Modified: 5/20/97

Description: TSDIS Requests Metadata Update from TSS,

The sequence of Gateway and handshake control messages and file transfers needed for TSUs to obtain data from TSS via TSDIS. TSDIS establishes a TCP/IP connection and sends the Start Session message. TSS returns the Start Session Acknowledgment message. TSDIS transmits a MUR and TSS responds with a MUA and TSDIS closes the session.

Objectives: The TSDIS sends a MUR to TSS. TSS sends a MUA in response to a MUR. The MUA message notifies TSDIS that either the MUR has been received, properly parsed, and the requested Quality Flag Metadata parameters have been updated or the request is incorrectly formulated and has been rejected.

Configuration: Users are able to change the configuration files. Software and hardware as detailed in the forward portion of this plan is available and operational.

Data Inputs: Users must change the configuration file to reflect the incoming and delivery gateway executables. A configurable port is set for TSDIS gateway. MUR and MUA message formats.

Methods for Results Analysis: This test will be successful if the external client can connect to a configurable port and verify MUR ->MUA, incoming and delivery gateways. Messages and files are transmitted between the TSS and TSDIS and that the messages and file formats agree with the ICD. Verify at the work stations that the messages are received and that acknowledgments are sent and received correctly.

Assumptions/Constraints: TBD

Verified Requirements:

DADS0760	DADS1030	DADS1806	DADS2160	DADS2180	DADS2340
DADS2430	IMS-0260				

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC TSS operator and open a UNIX-script file to maintain a test history.	Log-in allowed, script file initiated.			2/12/97
1.002	TSS and TSDIS	Validate IP address and password information.	Both systems ascertain valid information.			2/12/97
1.003	TSS and TSDIS	Verify connection between the two systems.	Each system is configured to receive data from each other.			2/12/97
1.004	TSS	Log onto the resource planner and verify that resources are configured to ingest data from TSDIS. If not, make the necessary configuration changes to perform this test.	The system is configured to receive data from TSDIS.			2/12/97
2.001	TSDIS	Send "Start Session" message				
2.002	TSS	Receive "Start Session" message and responds with "Start Session Acknowledgment" message.				3/6/97
2.003	TSDIS	Receives Start Session Acknowledgment and sends MUR message.				
2.004	TSS	Receives MUR message and responds with MUA message.				3/6/97
2.005	TSDIS	Receives MUA message				
3.001	TSDIS	Sends "Close Session" message.				
3.002	TSS	Receives "Close Session" message.				2/12/97

Test Case Id: V1-TST-03.007

Modified: 5/20/97

Description: TSS Ingest of Data from NCEP

Verify NCEP data ingest to TSS. This test will verify that TSS at the GSFC DAAC can pool and ingest NCEP data. Since the NCEP is outside the TSS DCE cell, communication between TSS and non-TSS data provider is necessary. "Polling with delivery record" will be used to verify communication between the Data Link Server, which first receives the NOAA/NCEP data, and the TSS. At the initiation of a DAR, the system should automatically, with operator tunable periodicity, poll the Server for NCEP data availability. On detection of a Delivery Record (DR), it will validate the DR and start data transfer. A comparison of the accessed data against the test data will verify data transfer success.

Objectives: Successful request and transfer of a data from NCEP to TSS for distribution.

Configuration: TBS

Data Inputs: TSS operator must be able to poll the Data Server and request data files from NCEP via a DR message.

Methods for Results Analysis: Verification of incoming file against request.

Assumptions/Constraints: TBS

Verified Requirements:

DADS0260 DADS1080

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC TSS operator and open a UNIX-script file to maintain a test history.	Log-in allowed , script file initiated.			2/13/97
1.002	TSS	Launch script capture.				2/13/97
1.003	TSS	Start FTP daemon.				3/6/97
1.004	TSS	Open Ingest Monitor screen. Show data provider server and list text view.	Polling begins in 1 minute.			2/13/97
1.005	TSS	Set polling frequency to 1 minute.	Polling begins in 1 minute.			2/13/97
2.001	TSS	Place DR and data file in designated directory. List contents of this directory.	Listing shows DR and data file. In 1 minute or less, TSS automatically retrieves DR via FTP "get" for validation and proceeds with ingest of data file.			3/6/97
2.002	TSS	Observe ingest of data file. Wait until ingest is complete.				2/13/97
2.003	TSS	Verify receipt of data file.	Data file received. Acceptance Notification sent.			2/13/97
2.004	TSS	Verify and validate AN.	AN received and valid.			3/6/97
2.005	TSS	Convert GRIB format into HDF-EOOS.	File is converted.			2/13/97
2.006	TSS	Compare data file against original test data.	Data file and test data are identical.			2/13/97
3.001	TSS	Log-out.				3/6/97

Test Case Id: V1-TST-03.008

Modified: 5/20/97

Description: TSS Users having Access to NESDIS/SAA for data.

The object of this test is to verify the following:

1. That the TSS user has access to NESDIS/SAA Ftp modem to browse and order data located at SAA.
2. Verify that the TSS user has capability to search and identify data located at NOAA Data Centers.
3. Verify that the TSS has the capability to ingest NOAA ancillary data for the TSS standard product generation.

Objectives: To demonstrate the ability of TSS users accessing NOAA Data Centers and the ability of TSS requesting ancillary data and downloading it.

Configuration: TBS

Data Inputs: TBS

Methods for Results Analysis: TBS

Assumptions/Constraints: TBS

Verified Requirements:

DADS0260 DADS1080

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	TSS	Log-in as a DAAC TSS operator and open a UNIX-script file to maintain a test history.	Log-in allowed, script file initiated.			2/13/97
1.002	TSS	Launch script capture.				2/13/97
1.003	TSS , NESDIS	Place new or re-named files in designated directory. List contents of this directory.	Listing shows new or re-named files.			2/13/97
1.004	TSS	Establish anonymous ftp connection to designated sub-directory at NESDIS	Successful ftp log-in. FTP prompt.			2/13/97
1.005	TSS	List contents of this directory.				2/13/97
1.006	TSS	Close FTP session.				2/13/97
2.001	TSS	Determine if there is new data to be transferred.	There are new data files.			2/13/97
2.002	TSS	Establish anonymous ftp connection designated sub-directory at NESDIS.	Successful ftp log-in. FTP prompt.			2/13/97
2.003	TSS	Issue one FTP "get" command for each data file needed.	FTP confirmation of successful transfer.			2/13/97
2.004	TSS	Close FTP session.				2/13/97
2.005	TSS	Compare data file against original test data.	Data file and test data are identical.			2/13/97